United States Department of Agriculture | Forest Service | Arizona Zone Entomology & Pathology | 2500 S. Pineknoll Dr. Flagstaff, AZ 86001

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Route To:

Subject: 1997 Insect and Disease Aerial Detection Survey of the Apache-Sitgreaves National Forests

To: Forest Supervisor, Apache-Sitgreaves National Forests

The annual insect and disease aerial detection survey was conducted over the Apache-Sitgreaves National Forests July 22 - 25 and August 20, 1997. Enclosed you will find maps depicting the forest insect and pathogen activity for 1997. The following is a summary of that activity.

Ponderosa pine mortality associated with western pine beetle increased for the second year in a row. The total acres observed was 7,630 and occurred most often in the ponderosa pine and pinyon pine transition zone areas. Last year's mortality was 1,507 acres. Pockets of mortality ranged in size from 1 to 10 trees and larger pockets up to 150 dead trees. Ips beetle contributed to approximately 248 acres of mortality on the forest. This is an increase from 98 acres in 1996. Dead trees were found in pockets of 1 to 10 trees.

Douglas-fir mortality increased from 572 acres in 1996 to 3,664 acres in 1997. Most of this mortality occurred in the vicinity of FR 25, the Bear Wallow Wilderness and Horton Creek. Pockets of mortality ranged in size from 1 to 10 trees up to larger polygons of 50 trees. True fir mortality due to a complex of insects and pathogens occurred on 919 acres. Most of the mortality was concentrated in the Bear Wallow Wilderness and Chevelon Canyon.

Aspen defoliation ranged from light to heavy this year and was detected on a total of 821 acres (light: 36 acres; and heavy 785 acres). Most of the defoliation occurred on Escudilla Mountain.

Western spruce budworm defoliation was not readily apparent this year. No defoliation was detected from aircraft.

Another insect which was detected from the air for the second season was green spruce aphid, Elatobium abietinum. This insect caused widespread premature leaf-drop on approximately 11,803 acres throughout the Forest. This insect feeds on the older foliage. It is believed that due to the unusually warm winter the populations of this insect were able to increase and continue to feed during the winter and early spring months.

Some spruce trees sustained a considerable amount of defoliation (> 60%) and it is unknown whether these trees will survive. There were trees which only had the newly flushed foliage for their compliment of needles. Jill Wilson of our office and Ann Lynch of the Rocky Mountain Research Station will be investigating various aspects of this problem over the coming year.

Included with this letter are maps from the Apache side of the Forest. The Sitgreaves maps will follow at a later date due to a shortage of blank maps. If you have any questions concerning this letter please contact Steve Dudley or myself at (520) 556-2072.

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